

## FIGURE 1

VAP-1 amino acid sequence (SEQ ID NO:1)

MAVLAVVLLLACLERA VAQTFGCSNTKINDQARKMFYDAHNDARRSMAKGLE  
PNKCGLLSGGKNVYELNWDCEMEAKAQEWADGCPSSFQTFDPTWGQNYATYM  
GSIADPLPYASMAVNGWWSEIRTVGLTDPDNKYTNSAMFRFANMANGKASAFG  
CAYALCAGKLSINCIYNKIGYMTNAIIEKGDAC TSDAECTTYSQCKNGLCYK  
APQAPVVETFTMCPSVTDQSDQARQNFLDTHNKLRTSLAKGLEADGIAAGAFAP  
MAKQMPKLVKY SCTVEANARTWAKGCLYQHSTSAQRPGLGENLYMISINNMP  
KIQTAEDSSKAWWSELKDFGVGSDNILTQAVFDRGVGHYTQMAWEGTTEIGCF  
VENCPTFTYSVCQYGPAGNYMNQLIYTKGSPCTADADCPGTQTCSVAEALCVIP

*vap-1* cDNA nucleotide sequence (SEQ ID NO:2)

ATGGCGGTATTAGCAGTGGTACTACTTCTAGCATGCCTGGAGAGAGCGGTTG  
CACAGACGTTCCGGCTGCTCTAACACCAAGATCAATGACCAGGCTCGTAAGAT  
GTTCTATGATGCTCACAATGATGCAAGACGAAGCATGGCTAAAGGGCTTGAG  
CCAAACAAGTGC GGACTCTTATCTGGTGGAAAGAATGTTTATGAATTGAATT  
GGGATTGCGAGATGGAAGCAAAAGCTCAGGAATGGGCAGACGGATGTCCCA  
GCTCTTTCCAGACATTTGATCCAACATGGGGGCAGAACTACGCGACGTACAT  
GGGATCGATTGCTGATCCGCTTCCATACGCTTCCATGGCTGTTAATGGGTGGT  
GGTCGGAAATTAGAACCGTAGGACTTACGGATCCTGATAACAAGTACACTAA  
CAGTGCAATGTTCCGATTTGCTAATATGGCAAATGGTAAAGCTTCAGCTTTTG  
GATGTGCATACGCGTTGTGCGCAGGAAA ACTATCCATCAATTGCATTTACAA  
CAAGATAGGATACATGACCAATGCTATCATTTATGAAAAAGGAGATGCCTGT  
ACCAGTGACGCTGAATGCACCACCTACTCAGACTCACAATGCAAAAACGGTC  
TTTGCTATAAGGCACCTCAAGCTCCAGTCGTTGAGACTTTCACAATGTGCCCT  
TCGGTCACGGACCAGTCGGATCAGGCGCGTCAAACTTCTTGGACACCCATA  
ACAAATTGCGTACAAGCCTTGCCAAGGGACTTGAAGCTGATGGAATTGCCGC  
TGGAGCATTTGCACCAATGGCCAAGCAAATGCCAAA ACTGGTAAAATACAGC  
TGCACAGTTGAAGCAAACGCCAGAACATGGGCCAAAAGGATGCCTTTACCAGC  
ATTCAACAAGCGCACAGAGACCAGGACTCGGTGAAAATCTTTATATGATCAG  
CATTAAACAACATGCCTAAAATTCAAACCGCGGAGGACTCCTCAAAGGCTTG  
TGGTCCGAGTTGAAAGACTTCGGAGTCGGTTCTGACAACATTCTGACCCAAG  
CAGTTTTTTGATCGTGGCGTTGGACATTACACACAAATGGCATGGGAAGGAAC  
TACTGAAATTGGATGTTTTGTGGAGAATTGTCCAACATTCATTATTCCGTAT  
GCCAATATGGTCCAGCGGGAACTACATGAACCAACTAATCTATACCAAGGG  
CTCACCATGCACAGCTGACGCCGATTGCCCAGGAACCCAGACATGCAGTGTC  
GCTGAAGCATTATGTGTTATCCCTTAGTAAATTTTCTATGCAACTCTTTGAAA  
GTCATAATAAATATGCAAAAATTA AAAAAAAAAAAAAA

## FIGURE 1, cont.

VAP-2 amino acid sequence (SEQ ID NO:3)

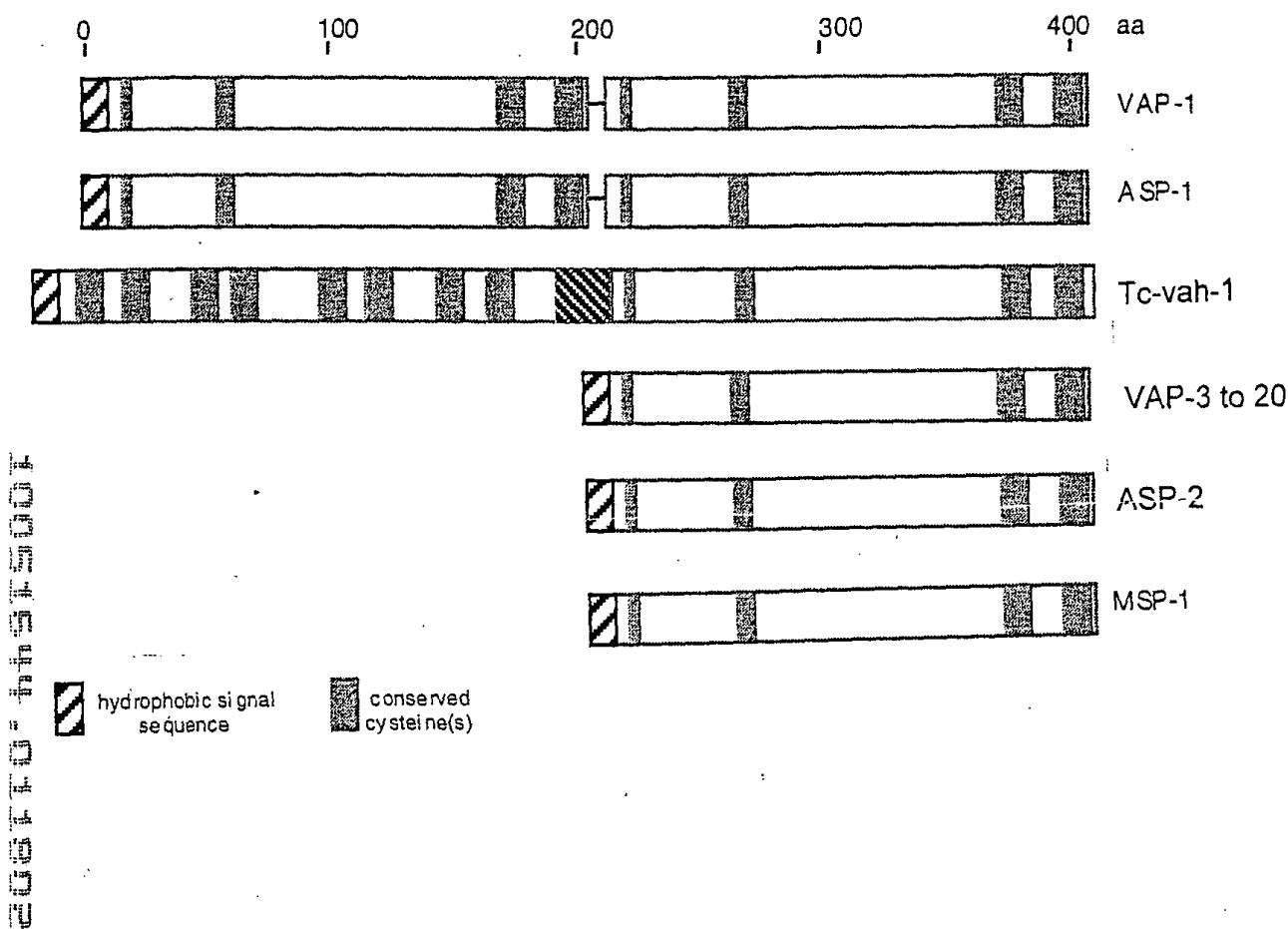
MNVVLSAVTLFLIFRYAQTVNIEGSGGNDELLEQNVWNDVDDKVVEALGGLDD  
ELLTEHVCNKSTITQLQQEIILTTHNELRRSLAFGKQRNKRGLMNGARNMYKLD  
WDCELASLANWSTSCPQHFMPSVLGSNAQLFKRFYFYFDGHDSTVHMRNA  
MKYWWQQGEEKGNEDQKNRFYARRNYFGWANMAKGKTYRVGCSYIMCGDG  
ESALFTCLYNEKAQCEKEMIIYENGKPCCEDKDCFTYPGSKCLVPEGLCQAPSMV  
KDDGGSFQCDNSLVSDVTRNFTLEQHNFYRSRLAKGFEWNGETNTSQPKASQM  
IKMEYDCMLERFAQNWANNVCVFAHSAHYERPNNQGNLYMSSFSNPDPRSLIHT  
AVEKWWQELEEFGTPIDNVLTPELWDLKGKAIGHYTQMAWDRITYRLGCGIANC  
PKMSYVVCHYGPAENRKNKIYEIGDPCEVDDDCPIGTDCEKTTSLCVISK

*vap-2* cDNA nucleotide sequence (SEQ ID NO:4)

ATGAACGTGGTCCTTTCCGCTGTCACCTCTTTTCTTATTTTTTCGATATGCGCAG  
ACTGTGAATATAGAAGGCAGTGGAGGAAATGATGAGCTTCTTGAGCAGAACG  
TGTGGAACGATGTAGACGACAAGGTTGTAGAAGCACTTGGTGGTCTTGATGA  
TGAAGTCTAACC GAACATGTGTGTAAACAAATCAACGATCACTCAGCTACAG  
CAGGAGATCATCTTGACAACCCACAATGAATTACGAAGATCATTGGCTTTTCG  
GAAAGCAAAGAAACAAGAGAGGTCTCATGAACGGTGCGAGAAATATGTATA  
AACTGGATTGGGATTGTGAAGTGGCATCACTTGCAGCCAATTGGTCAACCTCC  
TGCCCTCAGCACTTTATGCCGCAATCGGTACTTGGCTCCAACGCTCAGCTTTT  
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ACGCGATGAAGTATTGGTGGCAGCAAGGTGAAGAAAAAGGCAATGAGGATC  
AGAAAAATAGATTCTATGCCAGACGAAATTATTTTGGATGGGCAAACATGGC  
AAAAGGAAAAACATATCGAGTTGGATGCTCGTATATTATGTGCGGCGACGGT  
GAATCTGCACTTTTCACTTGTCTTTATAACGAAAAAGCCCAATGCGAAAAAG  
AAATGATTTACGAAAAATGGAAAACCTGCTGTGAGGATAAAGACTGTTTCAC  
ATATCCAGGATCAAAATGTTTAGTACCTGAAGGATTATGTCAAGCACCTTCTA  
TGGTAAAGGATGATGGAGGAAGTTTCCAATGTGATAACTCCCTTGTGTCAGA  
TGTCACCCGCAATTTCACTTTGGAGCAACACAATTTTATAGATCTCGTCTTG  
CAAAAGGTTTTGAATGGAATGGAGAAACAAACACTTCCCAGCCAAAGGCTAG  
TCAAATGATCAAAATGGAGTATGACTGCATGTTGGAACGGTTTGCACAAAAC  
TGGGCAAATAATTGCGTTTTTGCACACTCGGCACATTACGAAAGACCGAATC  
AGGGTCAGAATCTCTACATGAGTTCTTTCTCAAACCCTGATCCTAGAAGCCTT  
ATACATACGGCCGTCGAGAAGTGGTGGCAGGAATTGGAGGAGTTCGGTACTC  
CAATTGATAACGTTCTGACACCCGAATTGTGGGATTGAAAGGGAAAGCGAT  
AGGACATTACACTCAGATGGCCTGGGATCGTACTTACCGTCTTGGTTGTGGAA  
TCGCAAACGTCCGAAGATGTCGTACGTGGTTTTGTCACATATGGGCCAGCAGG  
CAACAGAAAGAACAATAAAATCTATGAAATCGGGGATCCTTGCGAAGTCGAT  
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CTCAAAATAA

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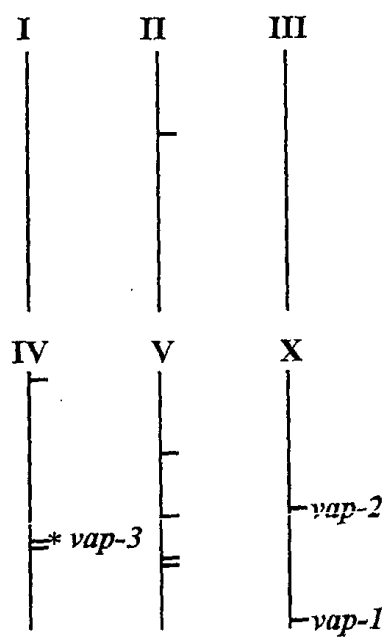
**FIGURE 2: Schematic diagram of nematode venom allergen protein domains**



CLUSTAL W Alignment of VAP-1, VAP-2, and selected other nematode VA proteins.

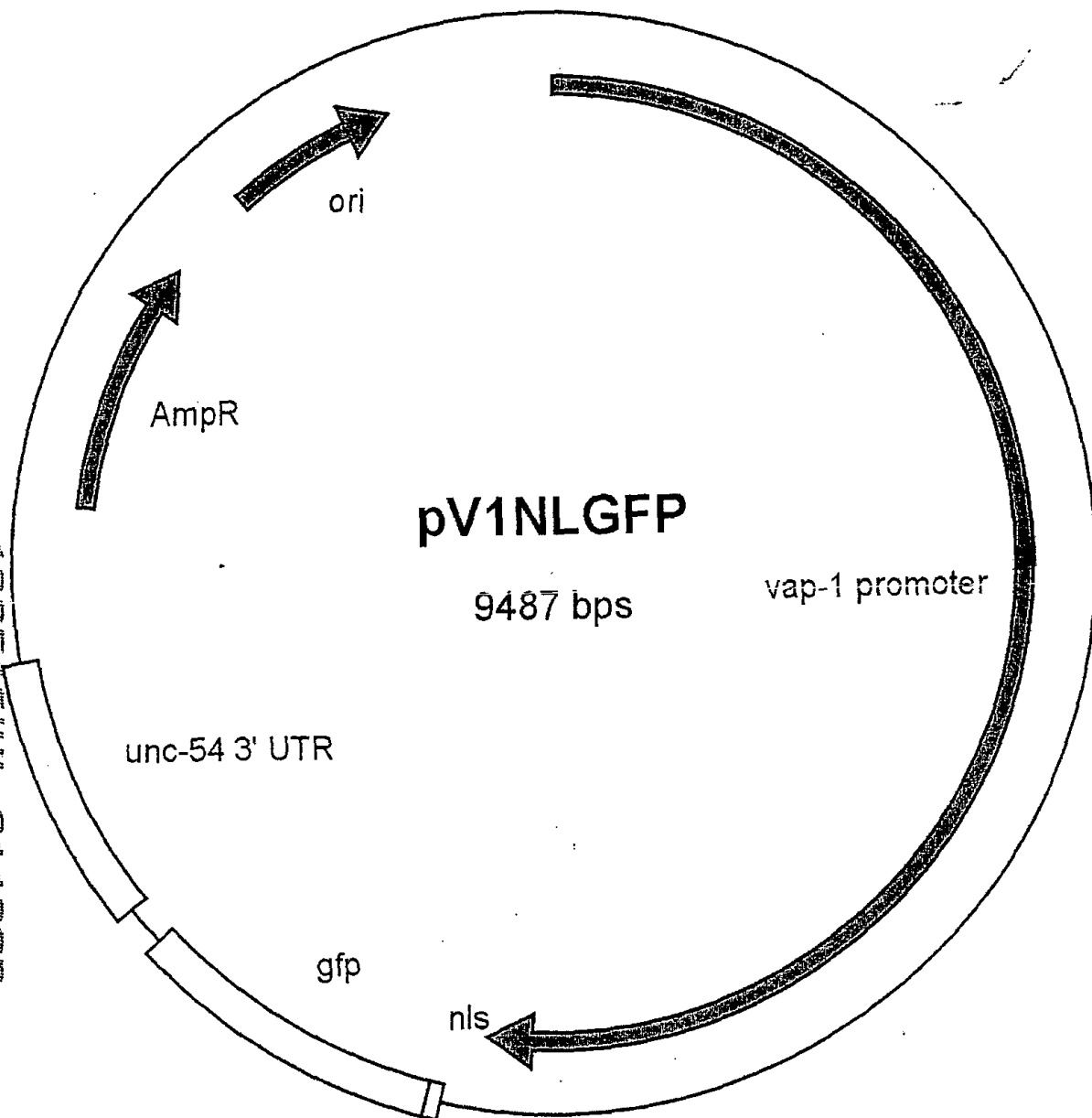


**FIGURE 4:** Schematic map of selected *C. elegans* *vap* genes

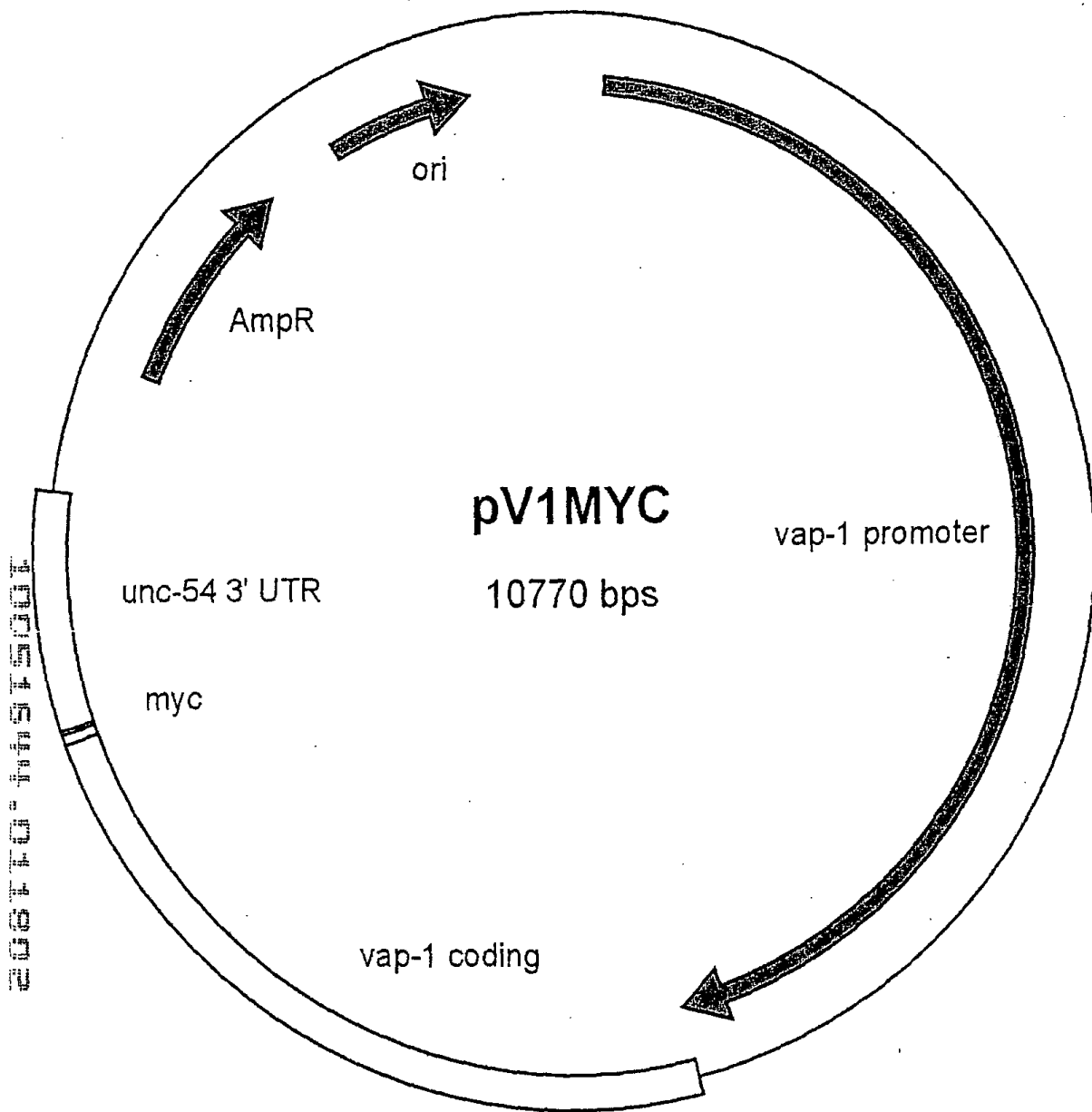


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**FIGURE 5A**



**FIGURE 5B**

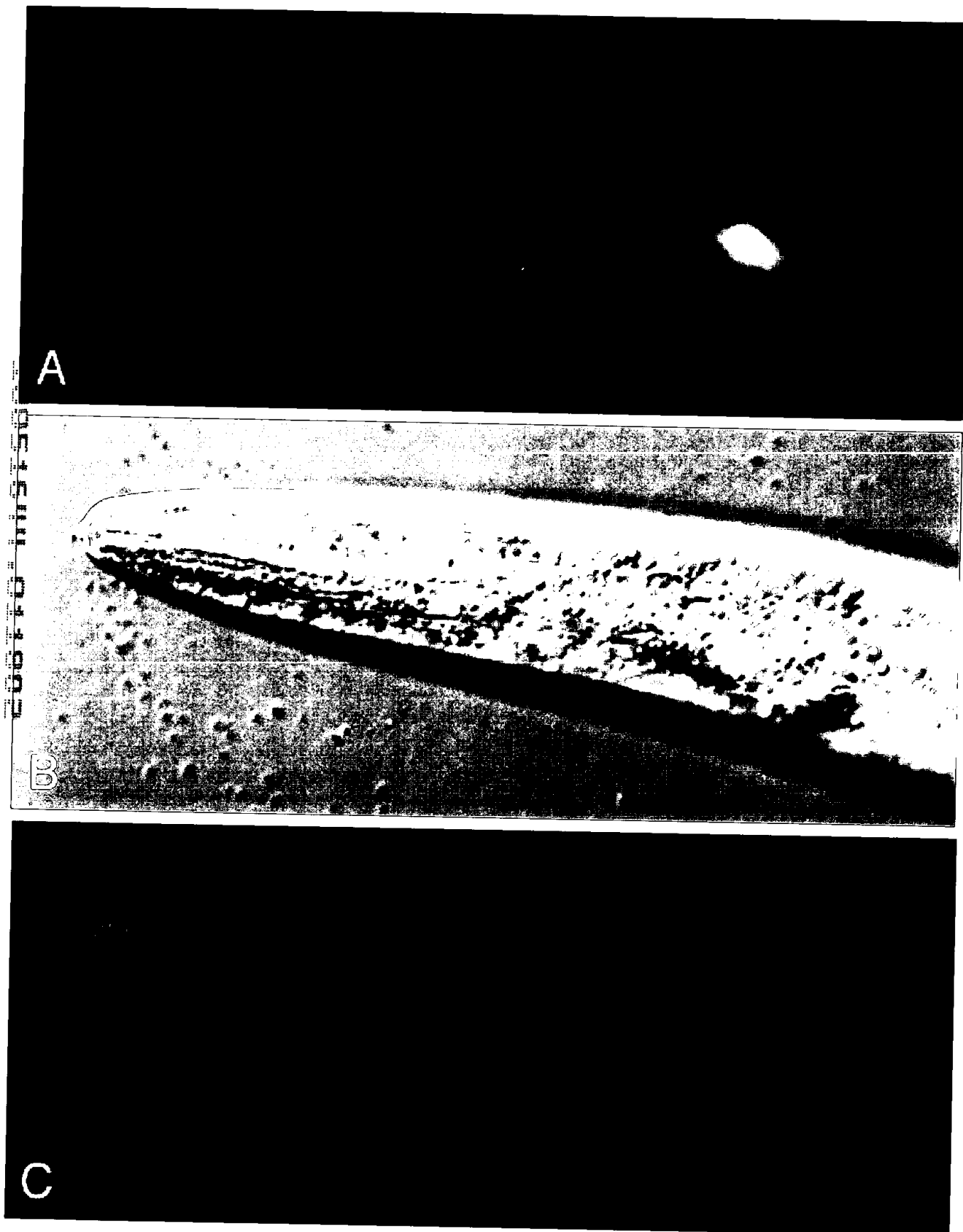


FIGURE 6



FIGURE 7

1

2

3

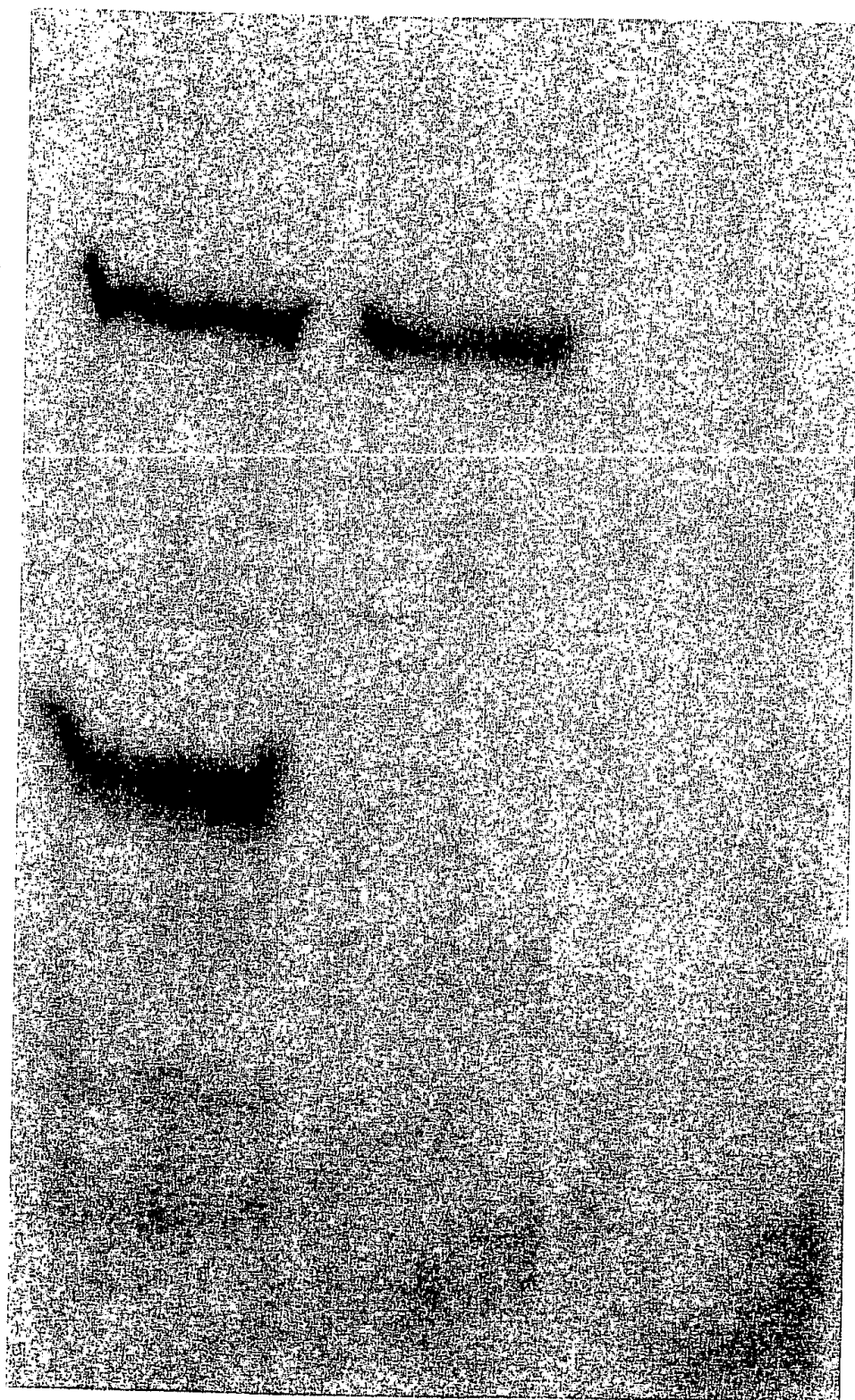
97 —

66 —

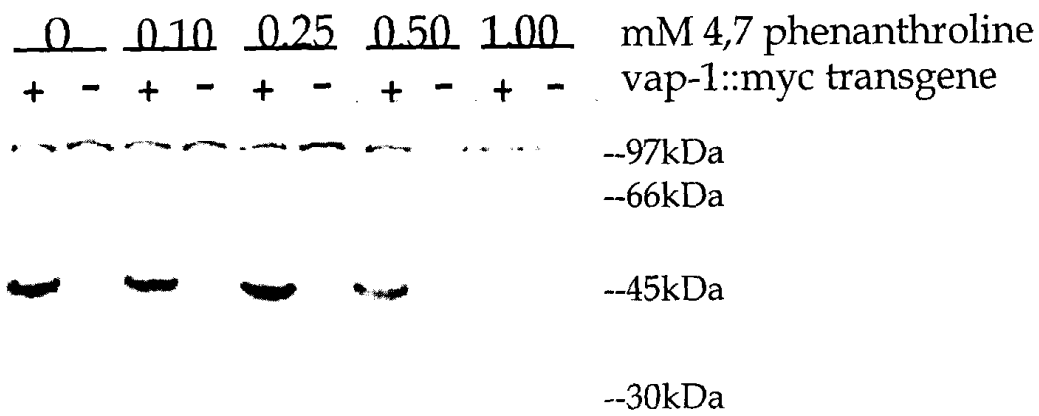
45 —

30 —

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**FIGURE 8**



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